

Synthesis of 6,7-Di-substituted 1-Azabicyclo- 79-28-5-8/69
-(3,2,1)-Octane

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemical and Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: May 25, 1957

Card 3/3

AUTHORS: Nikitskaya, Ye. S., Mikhlin, Ye. Ye., SOV/79-28-10-32/60
Yakhontov, L. N., Furshtatova, V. Ya.

TITLE: Synthesis of the Hydrazines and Hydrazones of Some Hetero-
cyclic and Aromatic Acids (Sintez gidrazidov i gidrazonov
nekotorykh geterotsiklicheskikh i aromaticeskikh kislot)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 26, Nr 10,
pp 2786 - 2790 (USSR)

ABSTRACT: In earlier investigations (Ref 1) it was shown that
the hydrazine of isonicotinic acid and its hydrazones
develop an antitubercular activity. It was, therefore,
of interest to the authors to synthesize the hydrazides
and their derivatives of the pyridyl-4-acetic acid,
 β -(pyridyl-4)acrylic and β -(pyridic-4)-propionic acid,
as these differ from the isonicotinoyl hydrazone only by the
presence of one and more methyl groups between the
pyridine nucleus and the hydrazine radical. Therefore
it was desired to obtain hydrazides and hydrazones
from acids of the piperidine and quinuclidine series
in order to explain the effect of the mentioned cycles
on the biological effect of these compounds and to

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Heterocyclic and Aromatic Acids

SOV/79-28-1c-32/60

compare them in this respect with the similar compounds of the pyridine series. To this end the hydrazides of the following acids were synthesized: isonipecotinic, pyridyl-4-acetic-, piperidyl-4-acetic-, β -(pyridyl-4)propionic-, β -(piperidyl-4)propionic-, β -(pyridyl-4)-acrylic-, 6-methyl picolic- and α -quinuclidine carboxylic acid. As the p-nitro-benzoic acid is closely related to the isonicotinic acid, its hydrazide and hydrazones were also synthesized to explain its structure and activity. The synthesis of the hydrazides was carried out by the reaction of the ethyl esters of the acids with hydrazine hydrate in alcohol solution (Refs 5,6) already earlier synthesized by the authors. The subsequent reaction of the hydrazides with various aldehydes lead to the hydrazones. The constants of the obtained products, analyses and yields are given in tables 1-4. The biological investigation of the antitubercular activity showed that the synthesized products are much less effective than the corresponding derivatives of isonicotinic acid. There are 4 tables

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Synthesis of the Hydrazines and Hydrazones of Some
Heterocyclic and Aromatic Acids

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and 6 references, 3 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze (All-Union Scientific Chemopharmaceutical Research Institute imeni S.Ordzhonikidze)

SUBMITTED: September 28, 1957

Card 3/3

AUTHORS: Furshtatova, V. Ya., Mikhlina, Ye. Ye., SOV/79-29-2-26/71
Rubtsov, M. V.

TITLE: Investigation of the Formation Reaction of N-Substituted
2-Aminomethyl-3-Vinyl Quinuclidines (Izucheniye reaktsii
obrazovaniya N-zameshchennykh 2-aminometil-3-vinilkhinukli-
dinov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 477-485 (USSR)

ABSTRACT: The question is raised in the present paper, whether the
N-substituted compounds of 2-aminomethyl-3-(β -oxyethyl)-
quinuclidine can be transformed into N-substituted compounds
of 2-aminomethyl-3-vinyl quinuclidine by distilling the re-
spective stearates and benzoates at normal pressure. Esters
were obtained by the reaction of chloric anhydride of stearic
and benzoic acid with the N-substituted compounds of
2-aminomethyl-3-(β -oxyethyl)-quinuclidine in benzene solution.
On distilling quinuclidine (I) two quinuclidines (II and III)
were formed. They were separated by treating the mixture with
mercury acetate in acetic acid solution, involving the sub-
sequent separation of the product of the affiliation of
mercury acetate to the unsaturated compound (II) and the

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Investigation of the Formation Reaction of
N-Substituted 2-Aminomethyl-3-Vinyl Quinuclidines

SOV/79-29-2-26/71

separation of (II). Besides (II) and (III) also ethyl stearate was separated. The formation of compound (II) is evidently accompanied by a separation of stearic acid (Scheme 1). Only the tricyclic derivative (II) and ethyl benzoate (Scheme 2) result from the distillation of compound (IV). A similar process is observed on heating quinuclidine (V) up to boiling temperature, in which connection benzoic acid, besides (III) is separated (Scheme 3). Heating of the compounds (VI) and (IX) with phthalic anhydride in the presence of benzene sulfo acid at 285° led only to compound (III) (Scheme 4). The structure of 2,3-(3',4'-N-ethyl piperidine)-quinuclidine was proven by a counter-synthesis, proceeding from 3-carbethoxy methyl quinuclidine-2-carboxylic acid. There are 5 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemico-pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: January 3, 1958
Card 2/2

5(3)

SC7/79-29-6-36/72

AUTHORS: Furshtatova, V. Ya., Mikhлина, Ye. Ye., Rubtsov, M. V.

TITLE: Synthesis of the Substituted Compounds of the 7-Aminomethyl-6-(β -aminoethyl)-1-azabicyclo-(3,2,1)-octane (Sintez zameshchennykh 7-aminometil-6-(β -aminoetil)-1-azabitsiklo-(3,2,1)-oktana)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1945 - 1949 (USSR)

ABSTRACT: For the purpose of carrying out the synthesis of the 6,7-diaminosubstituted compounds of 1-azabicyclo-(3,2,1)-octane the hydrochloride of 6-carboxymethyl-1-azabicyclo-(3,2,1)-octane-7-carboxylic acid (I) was converted into the corresponding acid chloride (II) by means of thionyl chloride. The latter was reacted with alkyl (aryl) amines and the amides (III) were obtained. The reduction of the amides with aluminum-lithium hydride led to the substituted compounds of the 7-aminomethyl-6-(β -aminoethyl)-1-azabicyclo-(3,2,1)-octane (IV) (Scheme 1). In the investigation of the properties of the diamines synthesized (IV) it was found that diamines which contain a non-substituted hydrogen atom bound to nitrogen, may be converted into the tricyclic system 6,7-(3',4'-N'-alkyl piperidino)-1-azabicyclo-

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Synthesis of the Substituted Compounds of the SOV/79-29-6-38/72
7-Aminomethyl-6-(β -aminoethyl)-1-azabicyclo-(3,2,1)-octane

(3,2,1)-octane (V) in the distillation in vacuum (Scheme 2). The formation of the tricyclic system (V) in this distillation was confirmed by the opposite synthesis of 6,7-(3',4'-N-benzyl piperidino)-1-azabicyclo-(3,2,1)-octane (V a) according to scheme 3. The 7-benzyl aminomethyl-6-(β -oxyethyl)-1-azabicyclo-(3,2,1)-octane (Ref 4) was converted into 7-benzyl aminomethyl-6-(β -chloroethyl)-1-azabicyclo-(3,2,1)-octane by means of thionyl chloride which yielded the compound (V a) in boiling with pyridine. There are 4 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemo-pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: May 15, 1958

Card 2/2

FURSIKOV, D.S.

Interrelation of the processes of excitation and inhibition. Trudy
fiziol. lab. 1 no.1/3:7-41 '53 (MLRA 9:5)

(CONDITIONED RESPONSE)

ACCESSION NR: AP4012567

S/0056/64/046/001/0386/0389

AUTHORS: Kaminskiy, A. A.; Korniyenko, L. S.; Makarenko, L. V.;
Prokhorov, A. M.; Fursikov, M. M.

TITLE: Investigation of stimulated emission of Nd³⁺ in calcium
fluorite at room temperature

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 386-
389

TOPIC TAGS: stimulated emission, molecular generator, maser, cal-
cium fluorite, neodymium impurity, neodymium doping, emission wave-
length, emission time dependence, radiation structure, fine struc-
ture component.

ABSTRACT: The only fluorite doped with Nd³⁺ previously found to ex-
hibit stimulated emission at room temperature was SrF₂ (L. F. John-
son, J. Appl. Phys., v. 34, 897, 1963). The authors report tests of

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ACCESSION NR: AP4012567

crystals grown from the melt in a fluoriding atmosphere by lowering the crucible. Emission was observed in crystals with neodymium oxide concentrations 0.3 and 1.5%, the approximate wavelength being 1.047 micron. The system was excited by absorption of light from a flash system at $14,000 \text{ cm}^{-1}$ above ground level. Emission corresponded to the $^4F_{3/2} \rightarrow ^4I_{11/2}$ transition. The illuminating system consisted of an elliptical system with the crystal in one focus and the flash lamp (80-mm glow column) in the other. The time dependence of the radiation was determined with a photomultiplier and oscilloscope. The structure of the radiation was determined with a spectrograph having a 600 line/mm grating. For the crystal with 0.3% neodymium oxide the emission line width was approximately 3 Å (4 fine structure components), increasing to 5 Å (12 components) for the 1.5% crystal. "The authors are grateful to V. V. Osiko and Yu. K. Voronko for supplying the fluorite crystals and for fruitful discussions." Orig. art. has: 2 figures.

Card 2/3

ACCESSION NR: AP4012567

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Nuclear Physics Institute, Moscow State University)

SUBMITTED: 28Oct63

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 001

OTHER: 001

Card 3/3

L 22571-65 EPF(c)/EPR/EWT(m)/EWP(b)/EWP(t) Pr-4/PS-4 IJP(c) JW/JD
ACCESSION NR: AP5003446 S/0181/65/007/001/0267/0273

AUTHOR: Voron'ko, Yu. K.; Osiko, V. V.; Udovenchik, V. T.; Fursikov,
M. M.

TITLE: Optical properties of calcium fluoride doped with triply ion-
ized dysprosium 27

SOURCE: Fizika tverdogo tela, v. 7, no. 1, 1965, 267-273

TOPIC TAGS: calcium fluoride, absorption spectrum, emission spectrum,
luminescence, laser material, laser dysprosium, rare earth element,
luminescence center

ABSTRACT: The absorption, emission, and excitation spectra of CaF_2
doped with Dy^{3+} were investigated using samples which differed in
chemical composition and in their growth conditions. It was found
that there are at least three types of Dy^{3+} doped CaF_2 crystals. The
differences can be attributed to a set of optical centers characteris-
tic of each type of crystal. Centers of tetragonal symmetry character-
ize Type I crystals and centers of trigonal symmetry, Type II. The
center structure of type III crystals could not be determined. It was

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ACCESSION NR: AP5003446

established that electronic transitions of Dy^{3+} centers correspond to electronic transitions of the free ion. The oxygen impurities in the Dy^{3+} ion are responsible for the appearance of specific absorption bands in the short-wavelength ultraviolet part of the spectrum. Investigation of the optical properties of chemically different Dy^{3+} doped CaF_2 crystals has shown that the crystals are rarely mixtures of more than one type. Orig. art. has: 5 figures and 2 tables. [CS]

ASSOCIATION: Fizicheskii institut imeni P. N. Lebedev (Physics Institute)

SUBMITTED: 09 May 64

ENCL: 00

SUB CODE: SS

NO REF SOV: 002

OTHER: 001

ATD PRESS: 3172

Card 2/2

L 55120-65 EWT(1)/EWT(m)/EPP(c)/EPR/EWP(b)/EWP(t) Pr-4/Ps-1/Ps-4 IJP(c) JD/JW

ACCESSION NR: AP5014584

UR/0181/65/007/006/1800/1807

AUTHOR: Voron'ko, Yu. K.; Krotova, L. V.; Osiko, V. V.; Udovenchik, V. T.; Fursi-
kov, M. M.

TITLE: Optical properties of the $\text{CaF}_2\text{-Nd}^{3+}$ crystals

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1800-1807

TOPIC TAGS: absorption spectrum, luminescence spectrum, ²¹fluorite crystal, neodymium activation, optical center, calcium fluoride ✓

ABSTRACT: Optical methods were used to investigate a large number of $\text{CaF}_2\text{-Nd}^{3+}$ crystals, grown by different methods and having different neodymium concentrations. The absorption and luminescence spectra of crystals whose optical centers contain ions of oxygen are investigated and described for the first time. The absorption spectra were recorded with a "Unicam" SP-700 instrument at room and nitrogen temperatures in the $53,000\text{--}5,000\text{ cm}^{-1}$ range, at a resolution of approximately $15\text{--}20\text{ cm}^{-1}$. The luminescence spectra were also obtained at room and nitrogen temperatures using a monochromator, a photomultiplier, and an automatic recorder. Two types of crystals were used: type I, having optical spectra similar

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to those described by Z. Kiss (J. Chem. Phys. v. 38, 1476, 1963), were obtained by the dropping-crucible method using a fluoridizing atmosphere, while crystals of type II were obtained by introducing the neodymium in the form of an oxide. The dependence of the optical spectra of the crystals on the concentration of neodymium was studied, and it is shown that a relative change takes place in the number of different optical centers with variation of the total concentration. The experimental data are compared with the theoretical calculation made previously by one of the authors (Osiko, FTT v. 7, 1294, 1965). The two types of crystals did not contain any coinciding lines and differed in the number of components in each of the spectral groups corresponding to the transitions in the free Nd^{3+} ions and in the distribution of the intensity between the groups. The spectra of type II crystals have not been described in the literature before. The absorption spectra of type II crystals showed less sensitivity to the concentration than crystals of type I. Orig. art. has: 7 figures. [02]

ASSOCIATION: Fizicheskii institut im. P. N. Lebedeva AN SSSR, Moscow (Physics Institute, AN SSSR)

SUBMITTED: 09Oct64

ENCL: 00

SUB CODE: 55, OP

NO REF SOV: 002

OTHER: 010

ATD PRESS: 4025

Card 2/2

L 42825-66 EWT(1)/EWT(m)/T/EWP(t)/ETI LIP(c) JD/JJ/JG/GG

ACC NR: AP6029832

SOURCE CODE: UR/0363/66/002/008/1533/1533

AUTHOR: Batygov, S. Kh.; Mikaelyan, R. G.; Fursikov, M. M. 64
B

ORG: Physics Institute im. Lebedev, Academy of Sciences SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: The effect of ²⁷cerium addition on the ²⁷optical properties of ²⁷gamma irradiated ¹⁹CaF₂:Dy³⁺ crystals

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 8, 1966, 1533

TOPIC TAGS: activated crystal, ²⁷calcium ²⁷fluoride, ²⁷dysprosium, ²⁷cerium, ion, luminescent crystal, ~~crystal~~ optical property, gamma irradiation, laser optic material

ABSTRACT: Incorporation of small quantities (0.04 wt.%) of CeF₃ into CaF₂:Dy³⁺ crystals contributed to an increase in thermal and photostability of unstable Dy²⁺ which is formed by gamma-irradiation of the crystals. These observations were made in a comparative study of thermal bleaching and luminescence of gamma-irradiated (10⁷ rad dose) CaF₂:Dy³⁺ crystals, with and without CeF₃ addition. After two hours bleaching at 100C, the CeF₃-containing gamma-irradiated crystals exhibited a constant coefficient of maximum absorption (at 715 mμ) which was higher than that of the similarly treated crystals without CeF₃. Also, intensity of absorption and luminescence due to Dy²⁺ increased and remained constant after a prolonged irradiation of the CeF₃-containing crystals. These increases in thermal and photostability and in the

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UDC: 548:539.104+539.12.04

L 42825-66

ACC NR: AP6029832

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intensity of Dy^{2+} absorption bands in the presence of cerium were tentatively attributed to the formation of Ce^{4+} ions in the process of irradiation. Orig. art. has: 1 figure. [JK]

SUB CODE: 20/ SUBM DATE: 30Dec65/ OTH REF: 002/ ATD PRESS: *ATD Press 5065*

Card 2/2 *lkh*

L 44703-66 EWT(m)/EWP(t)/ETI LIP(c) ID/IG

ACC NR: AP6031335

SOURCE CODE: UR/0386/66/004/003/0092/0096

AUTHOR: Kaminskiy, A. A.; Osiko, V. V.; Fursikov, M. M.

ORG: Institute of Crystallography, Academy of Sciences SSSR (Institut kristallografi Akademii nauk SSSR)

TITLE: The photoreduction $TR^{3+} \rightarrow TR^{2+}$ in fluorite crystals

SOURCE: Zh. eksper. i teoret. fiz. Pis'ma v redaktsiyu. Prilozheniye v. 4, no. 3, 1966, 92-96

TOPIC TAGS: fluorite, activated crystal, rare earth element, ionization, photoelectric effect

ABSTRACT: The authors describe the photoreduction of Nd^{3+} ions in CaF_2 crystals (type 1) to the divalent state under the influence of powerful light flashes. This effect has been observed so far only under the influence of hard radiation (γ , neutrons, deuterons, fast electrons), in chemical reactions, or in electrolysis. The investigations were carried out with CaF_2 crystals with 0.5 wt.% Nd^{3+} (type 1) at 300K. The crystals were synthesized by a procedure described earlier (Fizika tverdogo tela, v. 7, 267, 1965). In addition to $CaF_2:Nd^{3+}$, crystals containing, besides neodymium, small amounts of oxygen (O^{2-}) and cerium (Ce^{3+}) were also investigated. The powerful light flashes were produced by IFP-800 xenon lamps placed in an elliptical illuminator. The test procedure consisted in obtaining the absorption and luminescence spectra of the crystals prior to illumination at 77 and 300K, and comparing them with the spectra of

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ACC NR: AP6031335

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the illuminated crystals. The exposure to light colored the $\text{CaF}_2:\text{Nd}^{3+}$ (type 1) crystals light brown. A detailed analysis of the optical spectra of these crystals has disclosed the appearance of absorption bands, characteristic of the Nd^{2+} ions in CaF_2 , and no noticeable change in the intensities of the components of the initial Stark spectrum of the Nd^{3+} ions. The experimental results show that when $\text{CaF}_2:\text{Nd}^{3+}$ (type 1) crystals are exposed to powerful light flashes the Nd^{3+} is reduced to Nd^{2+} . This is attributed tentatively to free electrons produced by the illumination, either by a two-photon mechanism or by ionization of the impurity levels. The photoreduction is found to be influenced also by some extraneous impurities. Thus, for example, O^{2-} and Ce^{3+} impurities, which are assumed to produce additional levels of hole localization, by the same token increase the stability of the produced Nd^{2+} ions. The observed effect explains also the "aging" of $\text{CaF}_2:\text{Nd}^{3+}$ crystals (type 1) under stimulated emission conditions, as observed by one of the authors earlier (Kaminskiy et al., ZhETF v. 48, 476, 1965). A more detailed report of the study of the photoreduction in $\text{CaF}_2:\text{Nd}^{3+}$ crystals will be published in a separate paper. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 24 May 66/ ORIG REF: 002/ OTH REF: 003

hs

Card. 2/2

ACC NR: APT000005. SOURCE CODE: UR/0070/66/011/006/0936/0938

AUTHOR: Voron'ko, Yu. K.; Kaminskiy, A. A.; Osiko, V. V.; Fursikov, M. M.

ORG: Physics Institute im. P. N. Lebedev (Fizicheskiy institut);
Institute of Crystallography, AN SSSR (Institut kristallografi AN SSSR)

TITLE: Cerofluorite with neodymium admixture as active laser material

SOURCE: Kristallografiya, v. 11, no. 6, 1966, 936-938

TOPIC TAGS: crystal laser, laser optic material, laser emission,
calcium fluoride, fluorite, cerofluorite, absorption spectrum,
luminescence spectrum

ABSTRACT: Preliminary data were reported on absorption and luminescence spectra and stimulated emission of neodymium activated cerofluorite ($\text{CaF}_2\text{—CeF}_3$) crystals. The material was selected for the study because earlier studies of the mixed fluoride crystals of elements of groups II and III indicated the possibility of obtaining laser action with a low (~ 10 J) generation threshold at room temperature. The cerofluorite crystals activated with 0.5—1.0 wt% Nd were grown by a method previously described [A. A. Kaminskiy, V. V. Osiko. Neorganicheskiye materialy, 1, 2043, 1965]. Crystal rods ~ 45 mm long and ~ 55 mm in

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UDC: 548.0:535:80

ACC NR: AP7000005

diameter were used in the experiments. Very broad peaks characterized the electronic spectra of cerofluorite crystals as of the similar mixed fluoride crystals. The peaks were unresolved even at 77K. Spiked output was obtained on the $\lambda 10657 \text{ \AA}$ line from the cerofluorite crystal activated with $\sim 1.0\%$ Nd at a pump energy of $\sim 50 \text{ J}$ delivered to an IFP-800 xenon flash lamp. The cavity was formed by confocal spherical mirrors with dielectric coating. Width of the emission line was $\sim 3 \text{ cm}^{-1}$ for an excitation energy nearly equal to the threshold energy. Generation characteristics of the crystal were not inferior to those of the best $\text{CaF}_2\text{--Nd}^{3+}$ crystals, although the cerofluorite crystals used were optically heterogeneous. Energy transfer between different optical centers of Nd was assumed to be the mechanism of the generation mode. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 27Nov65/ ORIG REF: 008/ OTH REF: 003/
ATD PRESS: 5107

Card 2/2

LAGUTINA, L.Ye., kand. med. nauk; ZHELYAKOVA, A.V.; FURSIKOVA, V.L.

Symmetrical bilateral necrosis of the renal cortex in children. *Pediatrics* 41 no.10:72-75 0 '62.

(MIRA 17:2)

1. Iz kafedry fakul'tetskoy pediatrii (zav. - dotsent S.B. Davidson) Saratovskogo meditsinskogo instituta i proektury klinicheskogo gorodka Saratovskogo meditsinskogo instituta (zav. patologoanatomicheskim otdeleniyem R.A. Utts).

FURSIN, I., KRUPENNIKOV, G. A., and ZIGLIN, L. A.

"Mining Conditions in the Moscow Basin," Ugol', No.12, 1952

Translation W-26548, 2 Jun 53

1. FUSIN, I.
2. USSR (600)
4. Coal Mines and Mining - Moscow Basin
7. Roof classification in longwalls of the Moscow Coal Basin. Ugol' 27, no. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

ZAYDEL'SON, M.I.; LOBOV, V.A.; FURSMAN, B.G.

Studying the distribution of hydrocarbons in subsoil air in the
Leningrad region. Trudy VNIGNI no.17:250-252 '59.

(MIRA 13:1)

(Leningrad region--Gas, Natural--Geology)

DEREVENKO, V.V., dotsent; FURSIN, P.A., inzh.; FRISHMAN, V.S.

Use of electric drives in testing the working parts of a corn harvester. Trakt. i sel'khoz mash. 32 no.6:28-30 Je '62.

(MIRA 15:6)

1. Kubanskiy sel'skokhozyaystvennyy institut.
(Harvesting machinery--Testing)

FURSOV, A.F. (Moskva)

Photocolorimetric method for analyzing amyl nitrite and
nitroglycerine. Apt. delo 10 no. 1:9-13 Ja-F '61.

(MIRA 14:2)

(COLORIMETRY) (AMYL NITRITE) (NITROGLYCERINE)

FURSOV, A.F., provizor (Moskva)

Colorimetric determination of some cardiac glycosides. Apt. delo
10 no. 2:33-38 Mr-Apr. '61. (MIRA 14:4)
(CARDIAC GLYCOSIDES) (COLORIMETRY)

FURSOV, A.F. (Moskva)

Photocolorimetric method of analyzing phosphocol and armin. Apt.
delo 11 no.1:46-49 Ja-F '62. (MIRA 15:4)
(ARMIN) (PHOSPHORIC ACID) (COLORIMETRY)

FURSOV, A.F.

Photocolorimetric determination of phenoxymethylpenicillin
(penicillin V). Apt.delo 12 no.3:63-66 My-Je '62. (MIRA 16:1)
(PENICILLIN) (COLORIMETRY)

L 58794-65 ENT(1)/EWA(h) Feb GW/OS

ACCESSION NR: AT5020278

UR/0000/65/000/000/0005/0019

AUTHOR: Fursov, A. N.; Yaroshevskaya, G. A.

20
B+1

TITLE: Experience in the registration of deep-seated waves at intermediate magnetic-registration stations

SOURCE: Akademiya nauk SSSR. Institut fiziki Zemli. Voprosy metodiki glubinnogo seysmicheskogo sondirovaniya. Moscow, Izd-vo "Nauka", 1965, 5-19

TOPIC TAGS: seismic wave, geophysic expedition, seismologic instrument

ABSTRACT: This paper describes the principal characteristics of the low-frequency intermediate magnetic-registration apparatus (FMZ) developed at IFZ in the period 1960-1962 for operation with deep seismic sounding instruments. Results of exhaustive field tests of this apparatus in Kazakhstan during an expedition of the Institute of Geological Sciences, Academy of Sciences Kazakh SSR, gave promising results.

Orig. art. has: 6 figures, 6 graphs.

ASSOCIATION: none

SUBMITTED: 19Jun65

NR REF SOV: 008

ENCL:

OTHER: 000

SUB CODE: ES

FSB v. 1, no. 7

Csrd1/1

L 13842-65 EWT(1)/EWA(h) GW

ACC NR: AR6000814

SOURCE CODE: UR/0169/65/000/009/G022/G022

SOURCE: Ref. zh. Geofizika, Abs. 9G186

AUTHOR: Fursov, A. N.; Yaroshevskaya, G. A.

TITLE: An experiment in recording of depth waves by an intermediate magnetic recording station

CITED SOURCE: Sb. Vopr. metodiki glubin. seysmich. zondirovaniya. M., Nauka, 1965, 5-19

TOPIC TAGS: seismography, seismic prospecting, seismologic instrument

TRANSLATION: The authors discuss the systematic results of using an intermediate magnetic recording station in deep seismic sounding operations. The unit was based on a seismic prospecting station. The basic improvements were increased sensitivity, expansion of the frequency range and reduction of inherent noises in the equipment. The principle of frequency modulation is used. The dynamic range of the instrument is 50 db, the inherent noise level reduced to the input under full amplification is 0.3 mV, the passband at a 3 db level is 2-30 cps, the number of channels is 26, the

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UDC: 550.834
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ACC NR: AR6000814

recording time is 10 minutes. The unit was tested in the central Kazakhstan. Recordings on various filtrations made it possible to determine the optimum conditions for recording various types of waves. The authors point out the advantages of the instrument over ordinary oscillographic recording from the standpoint of the possibility for using various versions of frequency selection, grouping and mixing under recurrent excitation conditions. In addition, the intermediate magnetic recording station may be used for recording waves of various intensity for long intervals of time. It is pointed out that a distinction should be made between recording stations and repeat recording stations. The recording should be done at a stable and rather low scanning speed to produce the seismograms necessary for a general survey of the material.

SUB CODE: 08

CC
Card 2/2

GOLDAYEV, I.P., kand. tekhn. nauk; POLEVICHEN, Ye.I., kand. tekhn. nauk;
POLOV, N.N., kand. tekhn. nauk; FURGOV, A.P., inzh.

Air gas-jet thermal hammer for breaking rocks. Stroi. i dor.
mash. 10 no.6:19-21 Je '65. (MIRA 18:8)

FURSOV, A.Ya.

Effect of the lithologic characteristics of rocks on the nature
of indicator diagrams. Neftprom.delo no.2:19-21 '64.
(MIRA 17:4)

1. Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i
gazovoy promyshlennosti.

FURSOV, B., HELENSKIY, S., and GALENIN, A. D.

"Density Fluctuations And Light Scattering in Bose-Einstein and in Fermi Dirac Gases." Uchenye Zapiski, Moskovskiy Ordena Lenina Gosudarstvennyi Universitet imeni M. V. Lomonosova, Fizika. 1944, Vol 74, pp 59-66.

Moskov Ordena Lenina Gosudarstvennyi Universitet imeni M. V. Lomonosov.

Abstract: Math. In a Bose-Einstein gas the light scattering strongly increases when the temp. is lowered to near the condensation point. This criterion may be applied to He II.

FURSOV, D.

Repair and assembly of cars on assembly lines. Biol. nauch.
inform.: trud i zar. plata 5 no.7:18-22 '62. (MIRA 15:7)
(~~Kanash—Railroads—Cars—Maintenance and repair~~)
(Assembly-line methods)

FURSOV, D.A., aspirant

Complexly consolidated method of car repairs and its effect
on labor productivity. Trudy MIIT no.136:23-34 '61. (MIRA 15:1)
(Railroads--Repair shops)
(Railroads--Labor productivity)

GRISHAYEV, I.A. [Hryshaiev, I.O.]; TEREKHOV, B.A.; MYAKUSHKO, L.K.
[M^{ya}kiakushko, L.K.]; FURSOV, G.L. [Fursov, H.L.]

Titanium pump. Ukr.fiz.zhur. 4 no.6:750-754 N-D '59.
(MIRA 14:10)

1. Fiziko-tekhnicheskii institut AN USSR.
(Titanium) (Air pump)

82004

S/120/50/000/03/045/055
E032/E514

9.4250

AUTHORS: Grishayev, I. A., Terekhov, B.A., Myakushko, L.K. and
Fursov, G. L.

TITLE: Two Forms of a Titanium Ion-Sorption Pump²¹

PERIODICAL: Pribery i tekhnika eksperimenta, 1960, No 3,
pp 144-145

ABSTRACT: A sectional drawing of one of the pumps is shown in Fig 1. The titanium cylinder T is heated by the spiral K. The height of the cylinder is 28 mm, the outer diameter 13 mm and the thickness of the walls 1.5 mm. The pump is based on the absorption of gases by the cold walls of the body on which an active film of titanium is continuously evaporated. A simple ionization system ensures the removal of inert gases. A part of the spiral K serves as a source of electrons, and the anode is in the form of molybdenum washers. The working conditions are as follows: power consumed by the heater 350 W, temperature of the cylinder 1250 to 1300°C, amount of titanium consumed 0.05 mg/min, anode voltage 1000 V, anode current 200 mA, starting

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82004

S/120/60/000/03/045/055

E032/E514

Two Forms of a Titanium Ion-Sorption Pump

pressure 10^{-2} mm Hg, pumping speed for air(at 10^{-6} mm Hg) 30 l/sec and pumping speed for helium(at 10^{-6} mm Hg) 0.5 l/sec. The limiting pressure measured by the LM-2 manometer was found to be 5×10^{-8} mm Hg in a sealed-off pump. The warm-up time was less than 30 min and the anode voltage was switched on at a pressure of less than 10^{-4} mm Hg. It is desirable to use a backing pump incorporating a nitrogen trap. A photograph of the pump is shown in Fig 2. Fig 3 shows the basic arrangement of another pump of this type which has a larger store of titanium. The titanium cylinder A (10 mm dia., 28 mm long) is fixed on a molybdenum rod and is heated by the electrons emitted by the cathodes K. The screen E prevents the molybdenum holder from becoming too hot. The working characteristics of this pump are as follows: power consumed by the cathodes 300 W, anode voltage 1600 V, anode current 130 mA, consumption of titanium 1 mg/min, starting pressure 10^{-4} mm Hg, pumping speed for air(at 2×10^{-7} mm Hg)

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82001

S/120/60/000/03/045/055
E032/E514

Two Forms of a Titanium Ion-Sorption Pump

150 ℓ /sec. An active film of titanium will maintain a pressure of 10^{-5} to 10^{-3} mm Hg in a system when the titanium pump is switched off. Acknowledgment is made to G. A. Mishkin for valuable advice. There are 3 figures and 2 tables.

(Note: This is a slightly abridged translation)

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR
(Physico-Technical Institute, Ac.Sc., UkrSSR)

SUBMITTED: April 29, 1959

X

Card 3/3

FURSOV, G. L.

L 17633-63

S/056/63/044/003/050/053
EWT(1)/EWP(q)/EWT(m)/BDS/ES(w)-2 AFFTC/ASD/IJP(C)/SSD

Pub-4 GG/JD

AUTHOR: Alikhanyan, A. I., Garibyan, G. M., Lorikyan, M. P., Val'ter, A. K.,
Grishayev, I. A., Petrenko, V. A., and Fursov, G. L. 72

TITLE: Ionization energy losses of fast electrons in thin films 16

PERIODICAL: Zhurnal eksperimental'noy i tekhnicheskoy fiziki, v. 44, no. 3,
1963, 1122-1124

TEXT: G. M. Garibyan (Ref. 1: ZhETF, 37, 527, 1959) showed that whenever a charged particle passes through a sufficiently thin film, its electric field is the same as in the vacuum. Consequently, within such a layer the particle produces ionization as if there is no screening effect due to the medium, i.e., the density effect is not present. The measurements were carried out on the linear accelerator of the Fiziko-tekhnicheskoy institut Akademii nauk SSSR (Physico-Technical Institute of the AN USSR) using a battery of thin films to obtain the total losses with a sufficient accuracy and minimum fluctuations. The results are shown on Fig. 2. The results for a very thin film agree with the theoretical curve derived in Ref. 3 (R. M. Sternheimer, Phys. Rev., 103, 511, 1956). There are 2 figures.

Card 1/2

L 17633-63

S/056/63/044/003/050/053

Ionization energy losses...

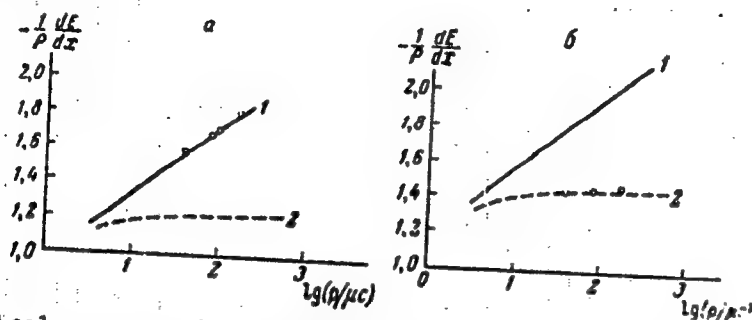


Fig. 2. Theoretical curves and experimental values for losses of energy in polystyrene (a) 10^{-6} cm thick and (b) $2 \cdot 10^{-3}$ cm thick. 1 - Theoretical curve neglecting density effects; 2 - theoretical curve taking care of the density [polarization] effects. Circles denote experimental results. The ordinate represents the specific transmission in relative units. [Curves are normalized at the 40 Mev electron energy points and the standard experimental error is 1%.]

SUBMITTED: January 7, 1963

Card 2/2

ACC NR: AP6019635 (A, N) SOURCE CODE: UR/0048/66/030/002/0371/0377

AUTHOR: Afanas'yev, N.G. Startsev, V.I.; Smolov, Ye.M.; Kuplennikov, E.L.;
Stepula, Ye.V.; Petrenko, V.V.; Fursov, G.L.

ORG: none

TITLE: Investigation of elastic scattering of 70 MeV electrons on C-12 and Be-9 and the mean square radii of those nuclei /Report, Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure, held at Minsk, 25 January to 2 February 1965/

SOURCE: AN SSSR, Izvestiya. Seriya fizicheskaya, v. 30, no. 2, 1966, 371-377

TOPIC TAGS: electron scattering, elastic scattering, form factor, nuclear radius, beryllium, carbon

ABSTRACT: The authors have measured the elastic scattering cross sections of C^{12} and Be^9 for 70 MeV electrons at different scattering angles between 30° and 150° in order to evaluate the root-mean square radii of the nuclei. The 70 MeV electron energy was chosen for the measurements because at that energy the momentum transfers are high enough to permit determining the momentum transfer dependence of the form factor, and yet low enough to allow of neglecting higher powers than the second (of the momentum transfer) in the expression for the form factor. The electron beam was produced by a pulsed accelerator. The primary beam intensity was measured with a secondary emission monitor which was calibrated with a Faraday cup. The electrons that were

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L 41309-66

ACC NR: AP6019635

elastically scattered at a given angle from the graphite¹⁵, polyethylene¹⁵ or beryllium foil target were focused with a magnetic field onto a Corenkov counter which recorded them. The scattering angle at which scattered electrons were recorded could be changed without brekking the vacuum. In addition to the measurements with the Corenkov counter measurements were realized with photographic recording of the scattered electrons. Although some of the corrections involved in the different techniques are different (the corrections are discussed at some length), the cross sections measured by the two different recording methods were in excellent agreement. The values obtained from the momentum transfer dependence of the form factor for the rms radii of Be^9 and C^{12} were 2.26 ± 0.1 and 2.35 ± 0.01 fermi, respectively. Orig. art. has: 12 formulas, 5 figures, and 3 tables.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 004 OTH REF: 002

Card 2/2 hs

FURSCV, K.Ya. (Chelyabinsk)

Conversion of numbers from one number system to another.

Zhur. vych.mat. i mat. fiz. 5 no.1:155-156 Ja-F '65. (MIRA 18:4)

FURSOV, L.A.

Correlation between conditioned food and play reflex actions in
a young chimpanzee. Zh. vys. nerv. deiat. 5 no.6:844-854 N-D '55.

(MIRA 9:3)

1. Laboratoriya aravnitel'noy fiziologii vysshy nervnoy deyatel'
nosti Instituta fiziologii imeni. I.P. Pavlova AN SSSR.

(REFLEX, CONDITIONED,

digestive & play conditioned reflexes in young
chimpanzee, correlation)

FURSOV, H.

How we achieved an increase in the production of coal. Mast.
ugl. 4 no. 4:6-7 Ap '55. (MLRA 8:6)

1. Mekhanik shakhty Ordzhonikidze, kombinata Stalinugol'
(Stalino Province--Coal mines and mining)

24541

10.6300

S/179/61/000/002/007/017
E191/E181

AUTHOR: Fursov, M.K. (Moscow)

TITLE: Contribution to the analytical determination of the rotary derivative coefficients for wings at supersonic speeds

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1961, No.2, pp. 89-96

TEXT: The linear problem of the oscillations of a thin wing in supersonic potential flow is considered. The undisturbed motion of the wing is a straight-line translation. Harmonic oscillations of infinitely small amplitude are superimposed on this motion. A plane wing is assumed. The aerodynamic forces and moments are expressed in terms of rotary derivative coefficients. The derivation proceeds from an expression for the potential of the disturbance velocity given by Ye.A. Krasil'shchikova (Ref.3: The finite span wing in compressible flow, Gostekhteoretizdat, 1952). This expression contains the Mach number and the Struhal number. The disturbance velocity potential is also expressed as a

Card 1/2

X

24541
S/179/61/000/002/007/017
E191/E181

Contribution to the analytical determination of the rotary derivative coefficients for wings at supersonic speeds

linear function of the basic kinematic parameters, the incidence, the angle of slip and the change of incidence due to wing deformation. This substitution becomes simplified for harmonic oscillations. Non-dimensional potential functions separately for the basic kinematic parameters and for their time derivatives are obtained by solving integral equations. The general derivation procedure is applied to obtain the rotary derivative coefficients for certain specific plane wings. Apart from the coefficients for the rigid wing, those for flexible wings are given in the case of a delta wing pointing forward, a delta wing pointing backward and a rectangular wing. In all cases, sinusoidal modes of deformation are assumed. For the delta wings, another case treated is that of deformations following a power law (generalised parabola). There are 6 figures and 4 references: 3 Soviet and 1 English. The English language reference reads as follows:

Ref.4: A. Robinson. Rotary derivatives of a delta wing at supersonic speeds. RAS, 1948, XI, v.52, No.455, pp.735-752.

SUBMITTED: June 11, 1960
Card 2/2

Forsov, M.N.

7238 AEC-17-2744 21

5

BROADENING OF SPECTRAL LINES AND OSCILLATOR
STRENGTH OF THE NOBLE GASES, V. S. Forsov, M. N.
Drozhzh, and A. B. Strigunov. Translation from Doklady
Akad. Nauk S.S.S.R. 191, 483-5 (1966) 4p.

A study was made of the width of spectral lines in
gases. A Fabry-Perot interferometer was used to meas-
ure the line widths and a diagram of the optical apparatus
is included. The widths of 7 spectral lines were measured
at pressures of 0.1, 46.7, 107, and 165 mm Hg, and the re-
sults are tabulated. The lines at 4510 Å and 1333 Å were
more greatly broadened with increased pressure than the
other lines. (B.J.H.)

RM
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age

S/118/61/000/004/005/005
A161/A127

AUTHORS: Fursov, N.D., Toshchin, V.I., Kushelev, V.I., Engineers

TITLE: Mechanization and automation means at Moscow City Sovnarkhoz plants

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 4, 1961, 40 - 43

TEXT: The article lists automatic machine tools, transfer lines and other items produced by plants of the Moscow City Sovnarkhoz: Stankozavod im. Sergo Ordzhonikidze (Machine Tool Plant im. Sergo Ordzhonikidze), "Krasnyy proletariy", Zavod koordinatno-rastochnykh stankov (Jig-Boring Machine Plant); the "Freezer" tool plant, "Krasnaya Presnya" Plant producing foundry equipment. The Special Design Offices "SKB-1", "SKB-6" are mentioned in connection with the development, as well as another special design office for woodworking machinery. A total of 66 transfer lines has been produced since June 1959 (data of the 1959 plenary session of CPSU Central Committee), and some of them are mentioned as examples of high productivity (a line does the machining of speed gear casings of the new "ZIL-130" truck at a rate of 60 per hour). The planned number of transfer lines put into service during the current Seven-Year-Plan in the machine building industry is 450. This includes lines for bearings, engine valves, etc. One line

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Mechanization and automation means ...

S/118/61/000/004/005/005
A161/A127

is to produce bearings of 17 sizes from 50 to 140 mm at a rate of 15 millions annually; another will be machining 9 sizes of frames and 5 of shields for crane motors and will be used at the "Dinamo" plant producing electric equipment. Unit-head machines of the im. Sergo Ordzhonikidze plant have 80% of the component units standardized. Quick-resettable and program-controlled machines are under development. Photographs show five items: a transfer line producing window frames (wood); a 6C133 (6S133) centerless grinder for the outside of bearing races, piston pins, etc. 30 to 200 mm in diameter with higher accuracy than the existing machines; a vertical 8-spindle semiautomatic lathe ("1283"); a horizontal 6-spindle automatic lathe; a semiautomatic sand-blasting machine for the making of molding cores. This 2857 (28B7) sand blower of the "Krasnaya Presnya" Plant, developed in cooperation with the NIILitmash Institute will be produced in lot-productions already in 1961. The illustrated machine tools and the sand-blower are suitable for the use in transfer lines. Work will be started during 1961 on a standard for mechanized tools such as pneumatic wrenches, shears, etc. The "Steklomashina" Plant producing machines for the glass industry is mentioned in connection with a semiautomatic pilot machine, ПЛП-24 (PLP-24) that will automate the manufacture of laboratory glassware at the "Laborpribor" Plant in Klin. New equipment planned for completion in 1961 includes automatic rotor lines

Card 2/3

PEVNEV, Nikolay Ivanovich; SMAGIN, Pavel Vasil'yevich; FURSOV,
Nikolay Dmitriyevich; MOZGALEVSKAYA, S.A., red.;
FONOMAREVA, A.A., tekhn. red.

[Public inspection in enterprises] Obshchestvennye smotry
na predpriятиakh. Moskva, Ekonomizdat, 1963. 102 p.
(MIRA 17:1)

FURSOV, N.D.

Problems of technical aesthetics in Moscow City industry.
Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekhn.
inform. no.3:75-76 '63. (MIRA 16:4)

(Moscow--Art and industry)

FURSOV, N.D.

Improving the quality, reliability and durability of articles
manufactured at the enterprises of the Moscow City Economic
Council. Biol.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i
tekh.inform. no.9:80-82 '63. (MIRA 16:10)

FURSOV, N.D.

Standardization of means for over-all automation. Standartizatsiia
28 no.4:50-54 Ap '64. (MIRA 17:6)

1. Nachal'nik SKBSN Tsentral'nogo nauchno-issledovatel'skogo
institut kompleksnoy avtomatizatsii.

FURSOV, N.D.

Standardisation and the instrument industry. Standartizatsia
29 no.10:10-12 0 '65. (MIRA 18:12)

L 25891-66 EWI(d)/EWP(c)/T/EWP(v)/EWP(k)/EWP(h)/EWP(l)/ETC(m)-6

ACC NR: AP6012360

(A)

SOURCE CODE: UR/0028/65/000/010/0010/0012

AUTHOR: Fursov, N. D.

ORG: none

TITLE: Standardization and instrument manufacture

SOURCE: Standartizatsiya, no. 10, 1965, 10-12

TOPIC TAGS: automation equipment, industrial production, industrial organization, agriculture, quality control, government economic planning

ABSTRACT: This paper deals with the inadequacy of state standards for instrument manufacture and outlines the plan of the State Planning Commission (Gosplan) for standardization in 1966-1970. The main direction for work in standardization in the instrument industry is the creation of a unified state system of instruments and means of automation. The plan calls for bringing the number of active standards in instrument manufacture from 436 to 1100 by the end of 1970 and for increasing the coverage by standards of the most important groups of instruments to 80-90%. The economic effect of the introduction of the planned standards will be about 150 million rubles.

SUB CODE: 14/ SUBM DATE: none

Card 1/1 U-A

UDC: 681.1/.2:289.6

FURSOV, N.I.;RIKHTER, V.A.

A new representative of the genus *Trichodes* Herbst (Coleoptera,
Cleridae) from Central Asia. Ent. oboz. 37 no. 3:708-709 '58.

(MIRA 11:10)

(Soviet Central Asia--Checkered beetles)

FURSOV, N. I.

Fursov, N. I. "Treatment of abscessed wounds with gramicidin," Sbornik nauch. trudov (Ist. n/D gos. med. in-t), Vol. VIII, 1948, p. 179-84.

SO: U-2988, Letopis' Zhurnal 'nykh Statey, No. 1, 1949.

FURSOV, N. I.

Fursov, N. I. "Faulty amputations of mangled hands and feet and the conditions of their preparation for prosthesis," Sbornik nauch. trudov (Rost. n/D gos. med. in-t), Vol. VIII, 1948, p. 185-95.

SO: U-2888, Letopis' Zhurnal 'nykh Statey, No. 1, 1949.

FURSOV, N. I.

USSR/Medicine - Literature
Surgery

Aug 49

"Collected Scientific Works of the Rostov-on-Don State Medical Institute, Vol VIII,
1948" 1/6 p

"Khirurgiya" No 6

Volume contains 17 works of interest to surgeons covering the years during and following World War II, including: M. A. Ukolova's "Production, Sterilization, and Properties of the Styptic Preparation 'Pul'min,'" G. S. Ivakhnenko's "Clinical and Surgical Treatment of Traumatic Aneurisms," N. I. Fursov's "Treating Suppurative Wounds with Gramicidin," N. I. Lagutina's "Tests of the Preparation 'Proteozogen' in Treating Suppurative Wounds of the Soft Tissue," and A. F. Dobroserdov's "Treating Chronic Empyema of the Pleura Due to Gunshot Wounds."

1/50762

1. FURSOV, N. I., DOCENT, CHIRVINA, Ye. D.
2. USSR (600)
4. Blood - Transfusion
7. Rectal administration of hemolyzed blood. Klin. med. 30, 1952.
9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

RUDAKOVA, Yu.I., kand.med.nauk, FURSOV, N.I., dots.

Experimental data on the absorption of radioactive phosphorus from
a burned surface [with summary in English]. Khirurgiia 34 no.6:102-104
My '58 (MIRA 11:7)

1. Iz kafedry obshchey khirurgii (zav. - prof. G.S. Ivakhnenko)
Rostovskogo gosudarstvennogo meditsinskogo instituta.

(BURNS experimental

radiophosphorus absorp. through burn site in rabbits
(Rus))

(PHOSPHORUS, radioactive

absorp. through site of exper. burn in rabbits (Rus))

FURSOV, Nikolay Mikhaylovich, aspirant.

Automatization of channeling machines and mining combines. Izv.
vys. ucheb. zav.; elektromekh. 1 no.3:130-136 '58. (MIRA 11:6)

1. Kafedra gornoy elektromekhaniki Novocherkasskogo politekhnicheskogo instituta.

(Mining machinery)
(Automatic control)

FURSOV, N.M.

Selection of an efficient type of electric drive for coal mining
machines. Trudy MPI 115:47-53 '61. (MIRA 15:4)
(Coal mining machinery--Electric driving)

FURSOV, N.N.

Geology of the crystalline basement of the northern part of the Soviet Baltic Sea region based on the data of aeromagnetic survey. Sov.geol. 5 no.4:110-114 Ap '62. (MIRA 15:4)

1. Kontora "Spetsgeofizika".
(Baltic Sea region--Magnetism, Terrestrial)
(Baltic Sea region--Geology)

AUTHOR: Pursov, N. N.

S/169/63/000/002/108/127
D263/D307

TITLE: Characteristics of aeromagnetic surveying in Pribaltika

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 29, abstract 2D175 (Razvedka i okhrana nedr, 1962, no. 8, 54-55)

TEXT: A description is given of a method of aeromagnetic surveying with increased accuracy, on a scale of 1:200,000, in the northern part of Pribaltika, carried out with a view to studying the deep structure of the region. The survey was carried out with the AEM-49 (AEM-49) instrument. Since the region is characterized by a strongly agitated magnetic field, the method of marking off main standard profiles was adopted in regions where the field was most even, which were plotted twice in opposite directions. The profiles were spaced at 100 - 120 km intervals, the length being 220 km. Corrections were made for the change of the null points and for the normal gradient of the magnetic field during processing of data from

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Characteristics of aeromagnetic ...

S/169/63/000/002/108/127
D263/D307

standard traverses, and the results were reduced to a single level, taking into account data of ordinary traverses made across the standard traverses. The mean square error, found from intersecting traverses, was $\pm 25\%$. The reliability of the method was confirmed by a ground survey. /-Abstracter's note: Complete translation._/

Card 2/2

L 1734-66 EWT(m)/EPF(c)/ENA(d)/ENP(t)/ENP(k)/ENP(z)/ENP(b) MJI/JD/WB

ACCESSION NR: AP5023350

UR/0304/65/000/005/0082/0083/620.179.3

AUTHORS: Chen, N. G. (Engineer); Fedorov, Yu. V. (Engineer); Bocharov, V. A. (Engineer); Fursov, P. F. (Engineer); Shust, T. F. (Engineer); Stolbova, Ya. A. (Engineer)

TITLE: Application of corrosion inhibitor KKh-2 in etching of steel products

SOURCE: Mashinostroyeniye, no. 5, 1965, 82-83

TOPIC TAGS: corrosion inhibitor, rust inhibitor, coke, ammonia, nitric acid, sulfuric acid, hydrochloric acid, metal etching, carbon steel, stainless steel/Kh18Ni9Ti steel, KKh 2 inhibitor, ChM inhibitor

ABSTRACT: A new corrosion inhibitor KKh-2 is proposed for use as an additive to etching compounds. Consisting of organic and inorganic waste products of the coke-chemical industry in ammonia water, the inhibitor is highly effective for protecting carbon steels against sulfuric, nitric, and hydrochloric acid solutions and against alkali. Tests at the Zhdanovskiy zavod tyazhego mashinostroyeniya (Zhdanov Heavy Machinery Construction Plant) with Kh18Ni9Ti stainless steel proved the inhibitor to be three times more effective than the previously used additive.

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L 1734-66

ACCESSION NR: AP5023350

When tested on St.3 carbon steel, it not only produced the desired effects but, unlike other inhibitors, it did not increase the time necessary for etching; it also reduced both the waste of metal and the acid used. KKh-2 is recommended as an efficient and cheap inhibitor in steel etching, especially for metallurgical and machine construction establishments located near coke-chemical plants. Orig. art. has: 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: IE, MM

NO REF SOV: 000

OTHER: 000

Card 2/2

CHEN, N.G.; BOCHAROV, V.A.; FURSOV, P.F.; SHUST, T.F.; DEKTYAREVA, V.K.;
BOROZDINA, R.R.; YUDINA, S.M.

Reducing the etching of welded joints in carbon and stainless
steels by acid solutions. Zashch.met. 1 no.6:726-728 N-D '65.
(MIRA 18:11)

1. Dneprodzerzhinskiy metallurgicheskiy zavod-vtuz.

L 27343-66 EWT(m)/T/EWA(d)/EWP(v)/EWP(t) IJP(c) JD/HM/HW/WB

ACC NR: AP6008031

SOURCE CODE: UR/0365/65/001/006/0726/0728

AUTHORS: Chen, N. G.; Bocharov, V. A.; Fursov, P. F.; Shust, T. F.; Dektyareva, V. K.; Borozdina, R. R.; Yudina, S. M.

ORG: Dneprodzerzhinsk Metallurgical Factory - vtuz
(Dneprodzeshinskiy metallurgicheskiy zavod-vtuz)

TITLE: On the inhibition of corrosion of welded joints of carbon and stainless steels

SOURCE: Zashchita metallov, v. 1, no. 6, 1965, 726-728

TOPIC TAGS: steel, stainless steel, electrochemistry, carbon steel, anti-corrosion agent, corrosion, arc welding, corrosion inhibitor / 1Kh18N9T steel, St-3 steel, 1Kh18N9T steel, KKh-2 anticorrosion agent

ABSTRACT: This investigation was conducted to check experimentally the effectiveness of the agent KKh-2, described by N. G. Chen (Zh. prikl. khimii, 1964, 37, 1958) as an inhibitor of corrosion in welded joints of carbon and stainless steels during the pickling process. The extent and nature of corrosion were determined metallographically. Polarization curves for the welds and for base

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UDC: 620.193.41

L 27343-66

ACC NR: AP6008631

metals in 20% H_2SO_4 solution were also determined. The experimental results are presented in graphs and tables (see Fig. 1).

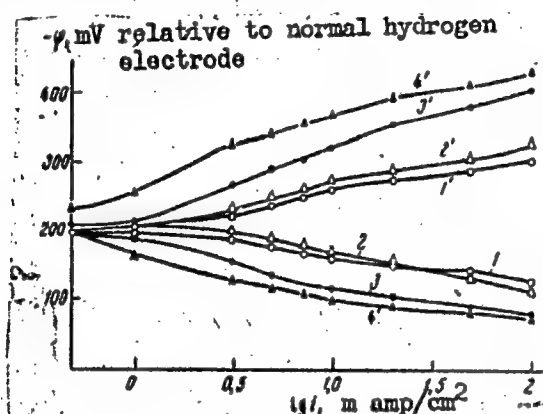


Fig. 1. Polarisation curves for steel St-3, determined for the welding seam and base metal in 20% H_2SO_4 . 1 - 1' welding seam (without KKh-2); 2 - 2' base metal (without KKh-2); 3 - 3' welding seam (with KKh-2); 4 - 4' base metal (with KKh-2).

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ACC NR: AP6008631

4

It was found that the addition of the inhibiting agent KKh-2 to the pickling solution inhibits the corrosion of carbon steel St-3 welds and completely prevents the corrosion of stainless steel 1Kh18N9T. It is suggested that the inhibiting action of the inhibitor KKh-2 is due to the presence of surface active agents in the latter. These agents prevent the adsorption of chloride ions on the surface of the metal and retard the rate of the cathodic and anodic processes. Orig. art. has: 2 tables and 1 graph.

SUB CODE: 13,11/ SUBM DATE: 14Feb65/ ORIG REF: 002

Card 3/3

P.B.

BORISOVSKIY, V. (Khar'kov); FURSOV, S. (Izhevsk); BELOV, V (Moskovskaya oblast'); SHLEYMAN, Yu (Nizhneudinsk Irkutskoy oblasti); GERASIMOV, V. (Saratovskaya oblast'); KOTELEV, V.

Readers' suggestions. Radio no.3:52 Mr '59. (MIRA 12:4)
(Radio)

FURSOV, S. P., Aspirant

"Deep Feeders of High Voltage to Large Cities." Cand Tech Sci, Moscow
Order of Lenin Power Engineering Inst imeni V. M. Molotov, 3 Dec 54. (VM,
23 Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher
Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

FURSOV, S.P.

High voltage lead-in into the center of large cities. Nauch.
dokl. vys.sbkoly; energ. no.2:27-32 '59. (MIRA 13:1)

1. Izhevskiy mekhanicheskiy institut.
(Electric networks)

FURSOV, Sergey Petrovich; ALEKSEYEV, Ye.N., red.; VORONTSOVA, Z.Z.,
tekhn. red.

[Storage battery charging devices with semiconductor rectifiers]
Poluprovodnikovye vypriamiteli dlia zariadki akkumulatorov.
Izhevsk, Udmurtskoe knizhnoe izd-vo, 1959. 47 p. (MIRA 15:8)
(Storage batteries) (Electric current rectifiers)
(Electric power supply to apparatus)

FURSOV, Sergey Iatrovich; IZHNEV SV, Yuzh., 1962.

[Semiconductor rectifiers for charging storage batteries] Poluprovodnikovye vypriamiteli dlia zaryadki
akkumulatorov. Izd.2., ispr. i dop. Izhevsk,
Udmurtskoe knizhnoe izd-vo, 1962. 55 p. (MIRA 17:6)

L 02319-67 EWT(l)/EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD

ACC NR: AR6016571

SOURCE CODE: UR/0196/65/000/012/1021/1022

AUTHOR: Fursov, S. P.

TITLE: Mechanical generators of electric pulses 75

SOURCE: Ref. zh. Elektrotehnika i energetika, Abs. 121149

REF SOURCE: Sb. Materialy dokl. 1-y Nauchno-tekhn. konferentsii Kishinevsk. politekhn. in-ta. Kishinev, 1965, 127

TOPIC TAGS: pulse generator, electric generator, electrospark machining

ABSTRACT: The summary of a report on electromechanical converters for producing electric pulses for electric spark machining of metals. A survey is given of various types of two-machine installations with generators of unipolar electric pulses. A single-machine unipolar asynchronous converter is considered which represents the combination in one unit of an asynchronous squirrel-cage motor and a generator of unipolar pulses with liquid metal current collector. G. Salgus. [Translation of abstract]

SUB CODE: 10, 13

Card

1/1 *ldh*

UDC; 621.313.291+621.313.333.2+621.314.522(043)

L 21661-66 EMT(m)/ETC(f)/ENG(m)/T DS

ACC NR: AP6000639

SOURCE CODE: UR/0407/65/000/001/0072/0073

AUTHOR: Lazarenko, B. R. (Kishinev); Fursov, S. P. (Kishinev);
Faktorovich, A. A. (Kishinev)

ORG: none

TITLE: Electrochemical pressure sensor 10

SOURCE: Elektronnaya obrabotka materialov, no. 1, 1965, 72-73

TOPIC TAGS: pressure measurement, gas pressure sensor, manometer

ABSTRACT: A two-electrode closed electrolytic cell (a 0.07-mm platinum wire serves as one of the electrodes) with a compressed gas over the electrolyte is recommended for measuring the gas pressure. Experiments carried out at 0-3 atm pressure and at 200-760 torr vacuum exhibited a clear relation between the gas pressure and the effective current flowing in a simple RL circuit. The advantages of the device are: simplicity, multipurpose feature, and strong direct electric signal. Disadvantage: effect of electrolyte temperature on the current. Orig. art. has: 2 figures and 2 formulas.

SUB CODE: 13, 09 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 003

Card 1/1

A/C NR: AP7001191

SOURCE CODE: UR/0407/65/000/05-/0019/0022

AUTHOR: Lazarenko, B. R. (Kishinev); Fursov, S. P. (Kishinev)

ORG: none

TITLE: Gas-turbine electric pulse generators

SOURCE: Elektronnaya obrabotka materialov, no. 5-6, 1965, 19-22

TOPIC TAGS: *electric equipment*
~~electric pulse~~ ~~electric~~ pulse generator, rotary pulse generator, gas turbine, ~~pulse generator~~, electrospark machining

ABSTRACT: The Institute of Applied Physics of the Academy of Sciences of Moldavian SSR has designed and built a new type commutating device for generators of electric sparks used in machining materials. The device combines the drive of a gas turbine (see Fig. 1) and a commutator which serves as turbine rotor disc 1 whose teeth during rotation contact commutating electrodes 2 and 3 and alternately close and open the spark generator circuit. The turbine is driven by a gas jet from nozzle 4; the commutator body (5) is made from an insulator material. The commutating electrodes are in the expansion zone of the exhaust gas, which ensures a satisfactory de-ionization of the spark gaps and also reliable and rapid extinction of the incidental arc discharge. An improved two-circuit design of the generator has two turbine discs mounted on a single shaft and electrically insulated from each other. The blades of the discs are straddled in relation to each other. The generator is supplied

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ACC NR: AP7001191

with industrial alternating current whose voltage is raised to several kilovolts by a transformer. The current is then rectified and fed to the spark generator.

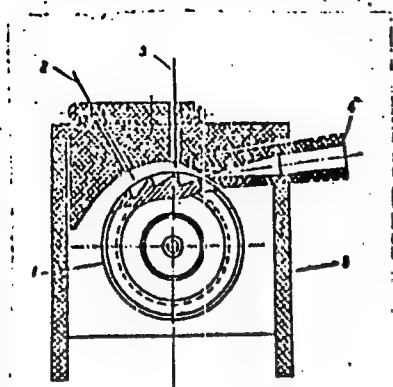


Fig. 1. Layout of a gas-turbine spark generator

1 - Turbine disc; 2 and 3 - pairs of commutating electrodes; 4 - nozzle; 5 - commutator body.

The pulse frequency is determined from the formula $f = mnz/60$, where n is the RPM of the turbine rotor, m is the number of the circuits, and z is the number of the commutator teeth. The gas-turbine pulse generator is small in size and weight and very stable in operation. The pulse frequency is easily controlled within wide limits. Orig. art. has: 3 figures.

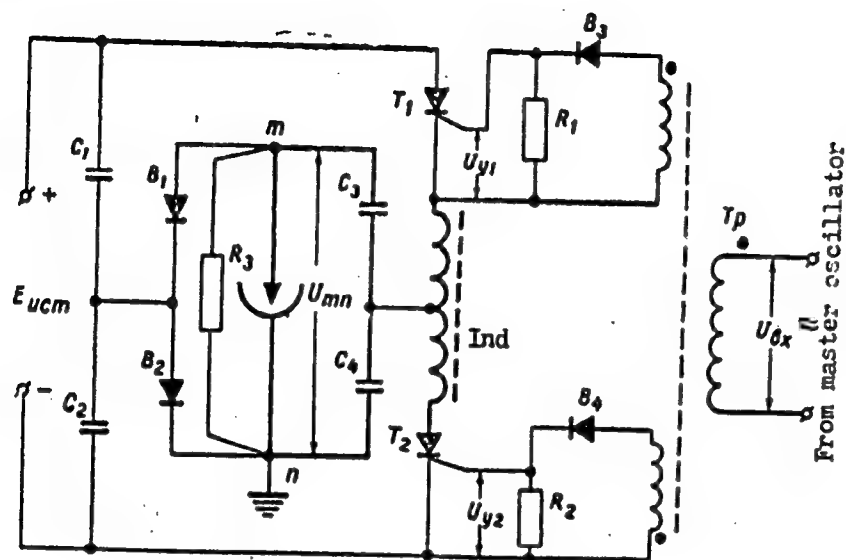
SUB CODE: 09, 2/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 003/ ATD PRESS: 5110 [MS]

Card 2/2

ACC NR: AP7001192 (A) SOURCE CODE: UR/0407/65/000/05-/0023/0026
AUTHOR: Fursov, S. P. (Kishinev); Lyubchik, M. Ya. (Kishinev); Fiks, M. S. (Kishinev)
ORG: none
TITLE: Thyristorized power source for electrospark-machining purposes
SOURCE: Elektronnaya obrabotka materialov, no. 5-6, 1965, 23-26
TOPIC TAGS: electric power source, power supply, electrospark machining, thyristor
ABSTRACT: Connected with some modern European electrospark-machining developments (Draht, 1963, 14, 12, 797-802), a simple pulse generator is suggested, in which the discharge pulses bypass semiconductor devices (see the discharge circuit in heavy lines in the figure). The generator is actually a series-type inverter formed by capacitors C_1, C_2 , inductor Ind , and thyristors T_1, T_2 . The inverter is loaded with a bridge circuit consisting of storage capacitors C_3, C_4 and diodes B_1, B_2 . The work sparkgap shunted by a kohm-range resistor R_3 is connected diagonally to the bridge. The generator converts d-c energy into homopolar pulses whose rate is equal to the double frequency of the master oscillator used for driving. An experimental hookup was tested at a rate of 800 pulses per sec with a d-c voltage of 150 v and a load resistance of 350 ohms. Principal characteristics (V-I, no-load voltage vs. rate, short-circuit current vs. rate) are shown; highest attainable pulse rate, 2000. Orig. art. has: 6 figures and 1 formula.

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ACC NR: AP7001192



SUB CODE: 13, 09 / SUBM DATE: none / ORIG REF: 007 / OTH REF: 001

Card 2/2

FURSOV, V., vzryvnik

A word about a colleague. Sov.shakht. 12 no.2:14 D '63.
(MIRA 17:3)

1. Shakhtoupravleniye No.1-10 tresta Kalininugol', Tul'skaya obl.

FURSOV, V., master-vzryvnik

Industrial efficiency is a creative power. Sov. shakht. 13 no.3:
15 Mr 64. (MIRA 17:3)

1. Shakhtoupravleniye No.1-10 tresta Kalininugol', Tul'skaya obl.

FURSOV, V.H.

SHVARTS, Boris Aronovich; LIPKINA, Vera Arkad'yevna; SEGAL', Solomon Grigor'yevich; BARANOVSKIY, Boris Konstantinovich; FURSOV, V.A., otvetstvennyy redaktor; LIPKINA, V.A., redaktor; LEDNEVA, N.V., tekhnicheskii redaktor

[New radiobroadcasting apparatus; a collection of papers] Tekhnika svyazi: Novaya radioveshchatel'naya apparatura; informatsionnyi sbornik. Moskva, Gos. izd-vo lit-ry po voprosam svyazi i radio, 1956. 108 p. (MIRA 10:1)

1. Russia (1923- U.S.S.R.) Ministerstvo svyazi. Tekhnicheskoye upravleniye.
(Radio--Transmitters and transmission)

FURSOV, V.A.

The SNPT-2-1 electromagnetic voltage regulator. Vest. svyazi
16 no.12:5-7 D '56. (MLRA 10:2)

1. Glavnyy inzhener Tsentral'nogo konstruktorskogo byuro
Ministerstva svyazi SSSR.
(Voltage regulators)

FURSOV, V.A.

Voltage stabilizer for wire broadcasting stations. Vest.sviazi 16
no.5:13-14 Je '56. (MLRA 9:8)

1. Glavnyy inzhener Tsentral'nogo konstruktorskogo byuro Ministerstva
svyazi SSSR.
(Voltage regulators)

FURSOV, V. A.

STATIONS & COMMUNICATION SYSTEMS

"Frequency Multiplexing of Interconnecting Lines of Automatic Telephone Stations," by V. A. Fursov, Chief Engineer of the Central Construction Bureau of the Ministry of Communication, U.S.S.R., and V. A. Lipkina, Engineer, Group Leader of the Central Construction Bureau. Vestnik Svyazi, No 9, September 1957, pp 12-14.

Description of apparatus designed to increase the capacity of existing cable lines used primarily in the Moscow Municipal Telephone Network. The multiplexing can be carried out over a relatively short distance. A complete block diagram and other technical data are given on this system. The equipment described is intended for 24 channel apparatus, but one for 30 channels is under development.

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FURSOV, V. A.

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000513910020-0

AUTHORS: Fursov, V.A., Chief Engineer of the Central Design Office of the USSR Ministry of Communications and Lipkin, V.A., Engineer, Group Supervisor of the Central Design Office.

TITLE: Frequency Condensing of Connecting Lines of Automatic Telephone Exchanges (Chastotnoye uplotneniye soyedinitel'nykh liniy ATS).

PERIODICAL: Vestnik Svyazi, 1957, Nr 9, pp. 12-14 (USSR)

ABSTRACT: Line-tests with 24-channel equipment for condensing HF lines connecting automatic telephone exchanges have been carried out in Moscow between two district automatic telephone exchanges with a capacity of 10,000 numbers each, by the Central Design Office of the USSR Ministry of Communications in cooperation with the Industrial Laboratory of the Administration of the Moscow Municipal Telephone Network (Upravleniye Moskovskoy gorodskoy telefonnoy seti "UMGTS"). They confirmed the possibility of condensing existing short telephone cable lines by means of the simplified small-sized "ABTV-1" equipment. Two pairs of strands contained in 114-quad cables in operation, each one having a length of 5,375 kilometers, were utilized as line to be condensed. The details of these tests with respect

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Frequency Condensing of Connecting Lines of Automatic Telephone Exchanges

to the attenuation and the frequencies are indicated. The frequency characteristics of the channel is "practically linear in the section between both cable-ends of the differential system having a load resistance of 1,000 ohms and a frequency-band of 600 - 3,000 cps. The frequency distortions do not exceed 0.3 nepers in the bandwidths of 300 - 600 and 3,000 - 3,400 cps. The amplitude characteristics of the channel, taken by applying the voltage at the input and by measuring the same at the output of the differential system, is practically linear in the range of 200 - 2,000 microvolts. The noise-level of the channel in the section between two complete "RSL" - units, measured by means of a psophometer, has 7 nepers. The cross-talk attenuation of adjoining channels, psophometrically measured (simultaneously with noises) at the far end, has a minimum value of 6.5 nepers. The simplified block-diagram of the equipment utilized in tests of condensing lines connecting automatic telephone stations is shown by Figure 1. The equipment installed at the end of each line contains (in addition to complete "RSL" - units) 24 differential systems, 24 transmitters, 24 receiver, one oscillator of 4,000 cps, a carrier-frequency oscillator, a group transmitting amplifier and a

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group receiving amplifier. This equipment allows a unilateral calling of 24 telephone subscribers and a duplex conversation in 24 channels. The effective frequency band of each channel has 300 - 3,400 cps. The transmission of dial- and breaking-impulses, as well as of all other signals, in connection with calling the telephone-subscriber, is effected beyond the band of the conversation channel at the frequency of 4,000 cps. The voltage-level of the signal-frequency (4,000 cps), is 1 neper lower than that of the voice-band (300 - 3,400 cps). The transmission of dial impulses is realized by cutting the current of the signal-frequency circuit. The transmission is effected in one side-band without carrier-frequency. The main 24-channel group has a frequency-band of 312 to 552 kilocycles. The interval between carrier-frequencies of adjoining channels is 10 kilocycles. The side-band of the channel, which is to be suppressed, is not heterodyned with that of the adjoining channel, which allows to limit the suppression of the second side-band much less than it is usual for the condensing equipment of long-distance communications. In this equipment, the upper side-band is suppressed by adding signals transmitted from two ring-modulators, the voltages of the carrier- and

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modulating frequencies being applied to each of them. Both these voltages, at the input of one modulator, have the same values as those at the input of the other modulator, but their phase are shifted by 90° . The block diagram of the modulator designated for frequency conversion of the speech band in each channel is shown by Figure 2. The apparatus of the telephone-subscriber is protected against the voltage of the signal-frequency by a filter producing an attenuation of up to 5 nepers at 4,000 cps. The effective output signal of the transmitter is the voltage of the lower side frequency band. The voltages of the upper side-band and the carrier-frequency do not exceed 10% of the voltage of the lower side-band. Figure 3 shows the block diagram of the demodulator. The HF modulated signal, consisting of 24 carrier-frequencies, each of them being modulated by the conversation frequency of one of the 24 telephone apparatus and by the signal-frequency of 4,000 cps, is applied parallel to the inputs of all the 24 receivers. The anode circuit contains a LF speech band filter, which filter produces an attenuation up to 6 nepers at 4,000 cps. The signal oscillator of 4,000 cps and the carrier-frequency oscillator are installed at each end of a connecting line.

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The signal oscillator must transmit sine-shaped signals having a determined power. The non-linear distortions do not exceed 3 - 5%. The carrier-frequency oscillator-set consists of a 10 kc master oscillator, a harmonic oscillator and 24 amplifiers of individual carrier-frequencies having pass band filters. The equipment contains 2 oscillator-sets of this kind. One of them, producing sine-oscillations of 10 kc has quartz stabilization. The group transmitting amplifier assures the voltage amplification of 24 parallel modulators. The frequency pass-band of this amplifier has 312 - 552 kilocycles. The minimum output voltage of the same is 200 microvolts, the resistance of the line to be condensed being the output load. New equipment had to be developed which required less manufacturing and service costs than those of the existing systems presently utilized for condensing long distance communication lines. Some of the improvements of the experimental equipment manufactured by the Central Design Office are ferro-ceramic parts and semi-conductor diodes. In 1957, this equipment has been tested on a line of the Moscow Municipal Telephone Network for condensing a standard 900-pair telephone cable with strands of 0.5 mm diameter each. The Soviet In-

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dustry, in cooperation with the Central Scientific Research Institute of the USSR Ministry of Communications, works on the development of a more perfect 30-channel equipment for condensing HF cable-lines connecting automatic telephone stations. An experimental model will be manufactured during 1957. The equipment will be mass-produced upon completion of the tests. This article contains 3 block diagrams.

ASSOCIATION: The Central Design Office of the USSR Ministry of Communications (TsKB Ministerstva svyazi SSSR)

AVAILABLE: Library of Congress

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